

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of January 14, 2005. Independent claims 16 and 23 are amended as shown. More specifically, these claims are amended to further recite distinctive subject matter. No new matter has been added. Claims 1-15 have been withdrawn from consideration. With this amendment, claims 1-32 are pending in the application.

I. Discussion of the Guetz Reference Cited in the Office Action

In the Office Action, claims 16-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Guetz (U.S. Patent No. 6,091,777). In particular on page 3 of the Office Action, the Examiner argued that Guetz does specifically disclose a server having the feature of “selecting multiple output video streams to send to corresponding multiple client devices and which correspond to capabilities of such client devices, including server selection of output video streams having the different bit rates that correspond to both multiple different client device capabilities and channel conditions.” However, the Examiner did state that Guetz nevertheless implies “sequential processing” in his Abstract and on column 6, lines 7-25. For the reasons set forth below, the applicants respectfully disagree.

As previously argued by the applicants on pages 12-13 of the amendment filed on November 15, 2004, Guetz does not disclose, teach, or suggest simultaneous multiple output video streams having different bit rates. Rather, Guetz discloses a single output video stream having a bit rate that is commensurate with the least capable client. *See, e.g.*, column 6, lines 34-37 and the Abstract of Guetz. As defined in the 2005 version of the Merriam-Webster Online Dictionary, the term “commensurate” means “corresponding in size, extent, amount, or degree.”

Interview Summary (Statement of Substance of Interview): The undersigned attorney and Examiner An conducted a telephone interview on February 24, 2005 to discuss Guetz and the applicants’ claims in view of the above features. The undersigned attorney and the applicants thank the Examiner for taking the time from his busy schedule to discuss the present application and for helping to move prosecution forward in positive and cooperative manner.

In the interview, the undersigned attorney explained that Guetz sends a single stream that has a bit rate commensurate with the least capable client, and therefore, all client devices receive the same bit rate. In response, the Examiner argued that it is possible in Guetz to provide a first bit rate at a first period of time to all clients, and then provide a second different bit rate to these clients at a second subsequent period of time, or in other words, a sequential or serial transmission of streams having different bit rates. Therefore, the Examiner suggested that the claims be amended to recite simultaneous output video streams having different bit rates or something to that effect to distinguish over Guetz. The applicants thank the Examiner for this helpful suggestion.

II. Discussion of Liu, Kalra, and Hayashi

Liu (U.S. Patent No. 5,970,233) and Kalra (U.S. Patent No. 6,490,627) were previously submitted by the applicants in a Second Supplemental Information Disclosure Statement (IDS) on March 30, 2005, along with the required certification. Hayashi (U.S. Patent No. 6,160,544) is also being submitted herein in a Third Supplemental IDS (with the appropriate certification) for the Examiner's consideration.

In an Office Action for another co-pending application (U.S. Patent Application Serial No. 09/502,409) assigned to the same assignee as the present application, Examiner A cited Guetz in combination with Liu to reject the claims in that application. Liu, Kalra, and Hayashi are submitted herein in this present application (as well as in the co-pending application) so that the applicants can ensure that they properly fulfill their duty of disclosure and to further demonstrate the distinctiveness of the present claims over these references.

More specifically, Liu does not disclose, teach, or suggest multiple simultaneous output video streams having different bit rates. Rather, the encoders 415 and 425 of Liu simply change a format of the input video data, such as “encod[ing] to or from an interim-level format such as YUV9, as explained hereinabove.” *See, e.g.*, column 6, lines 32-37 of Liu. As explained by Liu, “format” includes encoding formats such as those that involve YUV-formatted video data, RGB data, and so forth. *See, e.g.*, column 2, lines 25-46, and column 4, lines 7-23 of Liu. Liu is completely silent as to any feature that produces multiple simultaneous output video streams having different bit rates.

Assuming for the sake of argument that one attempts to hypothetically combined Liu with Guetz, the resulting apparatus/method/system would nevertheless still be different from the applicants' disclosed embodiments. First, Guetz requires that the bit rate of the output video stream be corresponding in size (commensurate) with the least capable client--therefore, while Liu may be able to provide multiple output video streams having different encoding formats, Guetz requires that such output video streams must have the same bit rate, namely, a bit rate commensurate with the least capable client. Second, the "layered" output video stream of Guetz requires that only a single output video stream be provided. From the layered structure, the client devices can select a layer that is most suitable for them. *See, e.g.*, the applicants' Remarks (top paragraph on page 12) of the previous amendment filed on November 15, 2004. Accordingly, the multiple output video streams of Liu cannot as practical or technological manner be combined with the required single output video stream (the layered stream) of Guetz in order to properly operate.

Kalra, in contrast to the embodiments disclosed by the present applicants, uses a completely different method to provide output streams to client devices. With embodiments disclosed by the applicants in the present application, a server or other network device determines which stream to send to which client devices. Such a feature is different than what is disclosed in Kalra and/or in Guetz. *See, e.g.*, the applicants' Remarks (sections A-B on pages 13-15) in the previous amendment filed on November 15, 2004. In Guetz, it is the client device that selects a layer. That is, the server of Guetz merely sends out a single output stream, and the individual client devices need to select the specific layer(s) from that single output stream that is suitable for them in order to obtain the desired video stream.

On page 3 of the present Office Action, the Examiner stated that Guetz on column 1, lines 38-40 discloses a web streamer that provides video data streams from stored video clips. The applicants respectfully argue that this passage is merely speaking about existing systems that are an alternative to Guetz's system, and therefore, this passage is inapplicable to Guetz's system and also inapplicable as a basis for rejecting the claims. That is, since the system of Guetz is sending a single output video stream having multiple layers, there are no "multiple output video streams" from which to select to send to corresponding multiple client devices. In other words,

there are indeed no “multiple choices” to select from if only one stream is available for transmission. Since the single output video stream of Guetz has multiple layers, this feature forces each client device to perform the layer selection--the server of Guetz does not perform the layer selection--the server merely sends out the single output video stream and leaves it up to the client device to perform the layer selection.

Kalra has similarities to Guetz. In Kalra, a base stream and a plurality of adaptive streams is obtained from an input video stream. *See, e.g.*, Figure 9A-9B2 of Kalra and the accompanying description. A client computer (or more specifically an adaptive streams program resident on the client computer) determines which of the adaptive streams it should receive and requests these adaptive streams from the server. *See, e.g.*, column 15, line 57 through column 16, line 40 of Kalra. The server sends the base stream and the requested adaptive streams to the client computer, and the client computer assembles and decodes the received streams for playback, using an adaptive stream decoder. *See, e.g.*, column 18, line 53 through column 19, line 2 of Kalra.

Therefore in Kalra, it is the client computer and not the server (or other back-end network device) that performs output stream selection. Also, the output streams of Kalra are “pieces” of the desired video stream. That is, rather than transmitting the desired video stream in its entirety, Kalra transmits different adaptive streams (“split streams”) that the client computer needs to assemble to obtain the desired video stream. In contrast, the embodiments disclosed by the present applicants involve a server or other network device that performs output stream selection and that sends out multiple different output streams in their entirety--the network device does not split each individual output video stream into its constituent parts, which is done by Kalra.

Hayashi simply discloses a technique for transmitting MPEG video signals to receiving devices. Hayashi is completely silent as to features involving simultaneous output video streams having different bit rates and/or other features present in the applicants’ disclosed embodiments.

### III. Discussion of the Amended Claims

In accordance with the suggestions from the Examiner, independent claims 16 and 23 are amended herein to recite simultaneous output video streams having the different bit rates. These are features that are not disclosed, taught, or suggested by the cited references. For example, Guetz does not provide simultaneous output video streams having different bit rates. Liu is completely silent as to changes in bit rate, but rather simply changes encoding format. Thus, independent claims 16 and 23 are now further allowable over Guetz and Liu, as well as the other references.

Independent claims 16 and 32 are also amended to recite that the output video streams are sent --in their entirety--. This feature further distinguishes over Kalra, because as discussed above, Kalra splits an input video stream into its constituent parts by sending a plurality of adaptive streams to client devices. Then, the client devices of Kalra have to re-assemble the received adaptive stream in order to obtain the desired video stream. The amendments to independent claims 16 and 32 that recite --in their entirety-- clarify that the individual output video streams are not themselves being split apart into constituent streams-- rather, the output video streams are streamed or otherwise transmitted in their entirety to the corresponding client devices.

Independent claims 16 and 23 presently recite server-side features associated with selecting the simultaneous output video streams having the different bit rates. As explained above, these features are not disclosed by the references. For instance, Guetz and Kalra disclose client-side selection of layers and adaptive streams, respectively. More particularly, the client computer of Kalra decides which adaptive streams it needs, and then requests these adaptive streams from the server. The client computer of Kalra then assembles the received adaptive streams in order to obtain the desired video stream.

Clearly, the server vs. client differences between what is recited in independent claims 16 and 32 and Kalra should be given due consideration. With embodiments associated with independent claims 16 and 32 since the server is deciding which streams to send to which client device, there is no need for the server to send multiple split streams to any individual client device so that the client device can assemble the streams. Rather, the server can send an individual stream in its entirety (*e.g.*, a complete stream having a desired bit rate, resolution,

encoding format, etc.) to each client device, so that the client device does not need to assemble split streams in order to obtain a desired video stream. With Kalra, in contrast, the active involvement of the client computer is required to assemble the split streams that are being sent by the server.

With the amendments and other recitations in independent claims 16 and 32, these independent claims are now allowable. Hayashi does not disclose, teach, or suggest the features recited in independent claims 16 and 32, and so therefore, these claims are allowable over Hayashi as well.

**IV. Supplemental Information Disclosure Statements**

As discussed above, the applicants previously filed a Second Supplemental IDS on March 30, 2005 that submitted Liu and Kalra for the Examiner's consideration. A Third Supplemental IDS is being filed herewith to also submit Hayashi for the Examiner's consideration. It is kindly requested that the Examiner return an initialed copy of the forms PTO-1449, having these references listed thereon, with the next communication so as to indicate that these references have been officially considered.

**V. Conclusion**

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

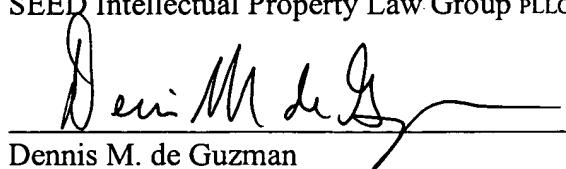
Application No. 09/502,390  
Reply to Office Action dated January 14, 2005

All of the claims remaining in the application are now clearly allowable.

Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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